

FREQUENCY HOPPING SPREAD SPECTRUM SCHEME FOR RFID READER

ABSTRACT

A system and method is provided for implementing forced frequency “hops” if the
5 time it takes to perform a particular transaction is greater than the time available on a
particular carrier frequency. In one embodiment of the present invention, a radio
frequency identification (RFID) base station processor (in conjunction with program
information stored in a base station memory) is adapted to (i) determine the amount of
time available on a particular carrier frequency (e.g., pursuant to Federal
10 Communications Commission (FCC) regulations, European Telecommunications
Standardization Institute (ETSI) regulations, etc.), (ii) determine the amount of time it
would take to perform a particular transaction, and (iii) force the base station to “hop” to
another carrier frequency if the transaction time is longer than the available time. In one
embodiment of the present invention, the time it would take to perform a particular
15 transaction is the time it would take to perform the next transaction. In another
embodiment of the present invention, the time it would take to perform a particular
transaction is the time it would take to perform the longest (or “worst-case”) transaction.
In alternate embodiments of the present invention, a transaction is defined as the
transmission of information (e.g., data, commands, etc.) or both the transmission of
20 information and the reception of related information.